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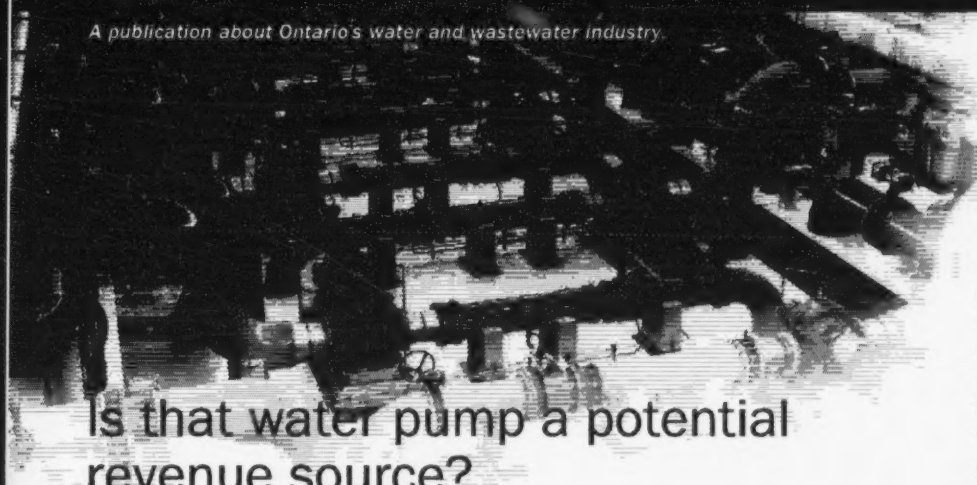
WaterLine

A publication about Ontario's water and wastewater industry.



Is that water pump a potential revenue source?

Sempa Power says its smart grid technology can help Ontario municipalities unlock revenues from their existing plant assets

The promise is decidedly bold – a brand new, no-strings-attached source of revenue for Ontario municipalities. But it's a promise Ron Dizy is confident his company, Sempa Power, can deliver upon.

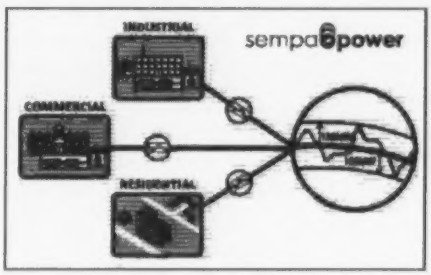
The Canadian-based company is bringing leading-edge smart grid technology to the province's water and wastewater treatment facilities. Sempa Power's innovative technology adjusts the manner in which water and wastewater treatment machines (e.g. large water pumps, aerators, etc.) use energy on a second-by-second basis.

"This is a true 'smart grid' application," says Dizy. "What we're talking about is taking advantage of the inherent flexibility in the minute-by-minute operation of a particular pump or aerator. This flexibility is valuable to the operation of the electricity system and Sempa's technology carefully manages a network of assets in the electricity system to provide electricity system balance capability to Ontario's Independent Electricity System Operator (IESO). This flexibility, also known as the 'system regulation', is then sold to the IESO, with the municipality receiving payment. This also means that the electricity system can operate its generators more efficiently, substantially reducing green house emissions in Ontario."

The company says the technology is seamless and unobtrusive to the municipality, meaning it has benign impact on physical operations, and respects the need for each piece of equipment to fulfill its primary duty. "It's essentially invisible to the facility owner, except for the cheque they receive," says Dizy.

Dizy says the amount of potential revenue varies depending on the size of the community. "There's probably up to $10 million in potential revenue to be had by municipalities all across Ontario under the program," he says. "Clearly, a larger community would be able to generate more revenue. For example, a city the size of Toronto could generate up to $2 million per year. But there are certainly opportunities for smaller communities too. The people we're talking to are telling us that any additional revenue is a good thing."

Upon learning of the technology, OCWA partnered with Sempa Power in April 2010 to help promote the use of this smart grid technology in Ontario water and wastewater treatment facilities. "In terms of environmental consciousness, this technology helps to free up hydro generators and puts more green energy into Ontario's grid," says Nick Reid, Vice President, Business Development for OCWA. "And we're also trying to do the right thing for our clients – helping to introduce them to a new revenue stream they've never had before, by simply leveraging their existing assets in a new way."



Founded in 2004, Sempa Power has a number of pilot projects underway, including one in New England. The company is currently looking for water and wastewater facility owners interested in participating in the smart grid program. Anyone interested in getting more information can visit www.sempapower.com or contact hdollinger@sempapower.com.

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Welcome to the summer 2010 issue of *Waterline*

A message from
Nick Reid, V.P. Business Development
Ontario Clean Water Agency

Our cover story poses the question, "Is that water pump a potential revenue source?" According to Ron Dizy, President and CEO of Sempa Power, the answer is a resounding 'yes'. The Canadian company is extolling the virtues of technology it says allows it to harness and sell the inherent energy demand flexibility capacity in a municipality's water/wastewater system. Based on the strength of its technology, OCWA partnered with Sempa Power in April 2010. Now, we're helping them spread the word about this innovative smart grid technology. Could your community use a new source of revenue?

In this issue, we also look at the *Water Opportunities and Conservation Act*, which was recently introduced by the Ontario Government. This new legislation promises to make Ontario one of the world's leading centres for the development and sale of forward-thinking technologies in water treatment and conservation. Special thanks go out to Peter Hume, President of the Association of Municipalities of Ontario (AMO) for sharing his thoughts on the potential implications for municipalities.

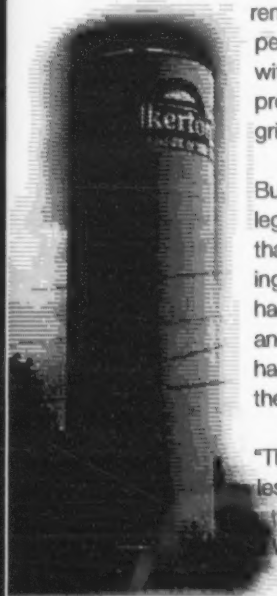
And as difficult as it might be to believe, it's been more than 10 years since the infamous E. coli tragedy in the Town of Walkerton. To mark the 10-year anniversary of the Walkerton crisis, we spoke with John Stager, Ontario's Chief Drinking Water Inspector and Assistant Deputy Minister with the Ministry of the Environment to get his thoughts on the changes that have taken place on the provincial drinking water landscape over the past decade.

We hope you enjoy this issue. As always, we're interested in your feedback, comments and story ideas. Feel free to write us at ocwa@ocwa.com.

Walkerton: 10 years later

What is the true legacy of the worst water contamination in Ontario's history?

It's been 10 years since the infamous E. coli tragedy that killed seven and sickened nearly 2,500 in the Town of Walkerton. More than a decade later, reminders of the disaster persist – victims coping with lingering health problems, families still grieving lost relatives.



But there's also another legacy of Walkerton – that of a provincial drinking water system that has been dramatically and fundamentally overhauled, making it among the safest in the world.

"There were many lessons learned from the tragedy of Walkerton," says John Stager, Ontario's Chief Drinking Water Inspector and Assistant Deputy Minister with the Ministry of the Environment. "And the 121 recommendations from the O'Connor Inquiry, all of which have been implemented, led to a major transformation in Ontario. As a result, our province has emerged as one of the leaders in the area of drinking water protection globally."

Among the findings in the Report of the Walkerton Commission of Inquiry was the role operator error played in the Walkerton disaster. Today, as a result of Justice O'Connor's recommendations, the Walkerton Clean Water Centre enjoys a reputation as a world-class institute, providing training and education to drinking water system owners and operators. More than 23,000 people have received specialized training since the Centre opened its doors in 2004. "Today, our operators in Ontario are likely the best trained in North America," says Stager.

A decade later, the legacy of Walkerton also includes a renewed emphasis on protecting our lakes and rivers. "Justice O'Connor had 21 recommendations related specifically to source water protection. We have implemented all of those recommendations," says Stager.

The Walkerton water contamination will always be known as one of the darkest periods in Ontario's history. But as we mark the tenth anniversary, it is reassuring to see that the difficult lessons have not been forgotten.

Indeed, the Walkerton crisis and resulting inquiry served as a catalyst for the transformation of the provincial drinking water landscape. But as Stager says, "Despite the positive changes that have occurred, ongoing vigilance will be vital to help ensure the safety of our drinking water for years to come."

Ultimately, it may be this steadfast commitment to vigilance in protecting our water supply that is Walkerton's true legacy.

Ontarians encouraged to participate in World Water Monitoring Day (WWMD)

For the second consecutive year, OCWA will be an official partner for World Water Monitoring Day (WWMD), an international program that shines the spotlight on the importance of protecting water resources.

WWMD encourages citizens to conduct basic monitoring of their local water bodies and upload the results online. Last year, 122,599 people from 81 countries participated in the program. Only 571 were from Canada. While that figure represents a 90% increase over 2008, it's still low, particularly given Canada's abundance of fresh, clean water.

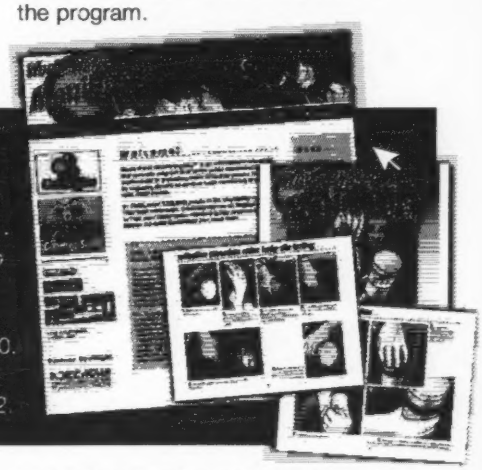
"We're honoured to be promoting this important program in Ontario again this year," said Wilf Argue, OCWA's Marketing Manager. "World Water Monitoring Day is a great way to get young people interested and involved in protecting the quality of our water sources. We're hoping to build on our positive momentum and get even more people involved for 2010."

An easy-to-use test kit lets anyone sample local water bodies for a core set of water quality parameters including temperature, acidity (pH), clarity (turbidity) and dissolved oxygen (DO). Results are shared with participating communities around the globe via the WWMD website: www.worldwatermonitoringday.org.

OCWA is making testing kits available in communities where it operates. The Agency is also visiting schools and other community organizations to promote the program.

WWMD: The lowdown

- While WWMD is celebrated on September 18, the monitoring window extends from March 22 to December 31.
- Each testing kit can be used to test up to 50 sites.
- The deadline for submitting data to the WWMD database is December 31, 2010.
- Program organizers aim to extend participation to one million people by 2012.



New Act will fuel water management innovation in Ontario

The challenge to increase efficiency, develop sustainable practices and eliminate waste is being faced by governments, corporations and individual citizens across the country. Growing public concern over the environment, coupled with the recent economic downturn, means those concepts are more important than ever.

With that in mind, the Ontario government recently unveiled new legislation that promises to drive important innovation in the water management field. The *Water Opportunities and Conservation Act* promises to make Ontario one of the world's leading centres for the development and sale of forward-thinking technologies in water conservation and treatment.

The Act is an ambitious piece of legislation that would require public agencies to create conservation plans and meet targets set by the Ministry of the Environment. It would also allow for broad introduction of water efficiency labelling on eligible showerheads, faucets, appliances and other household items to encourage consumers to buy products that help conserve water.

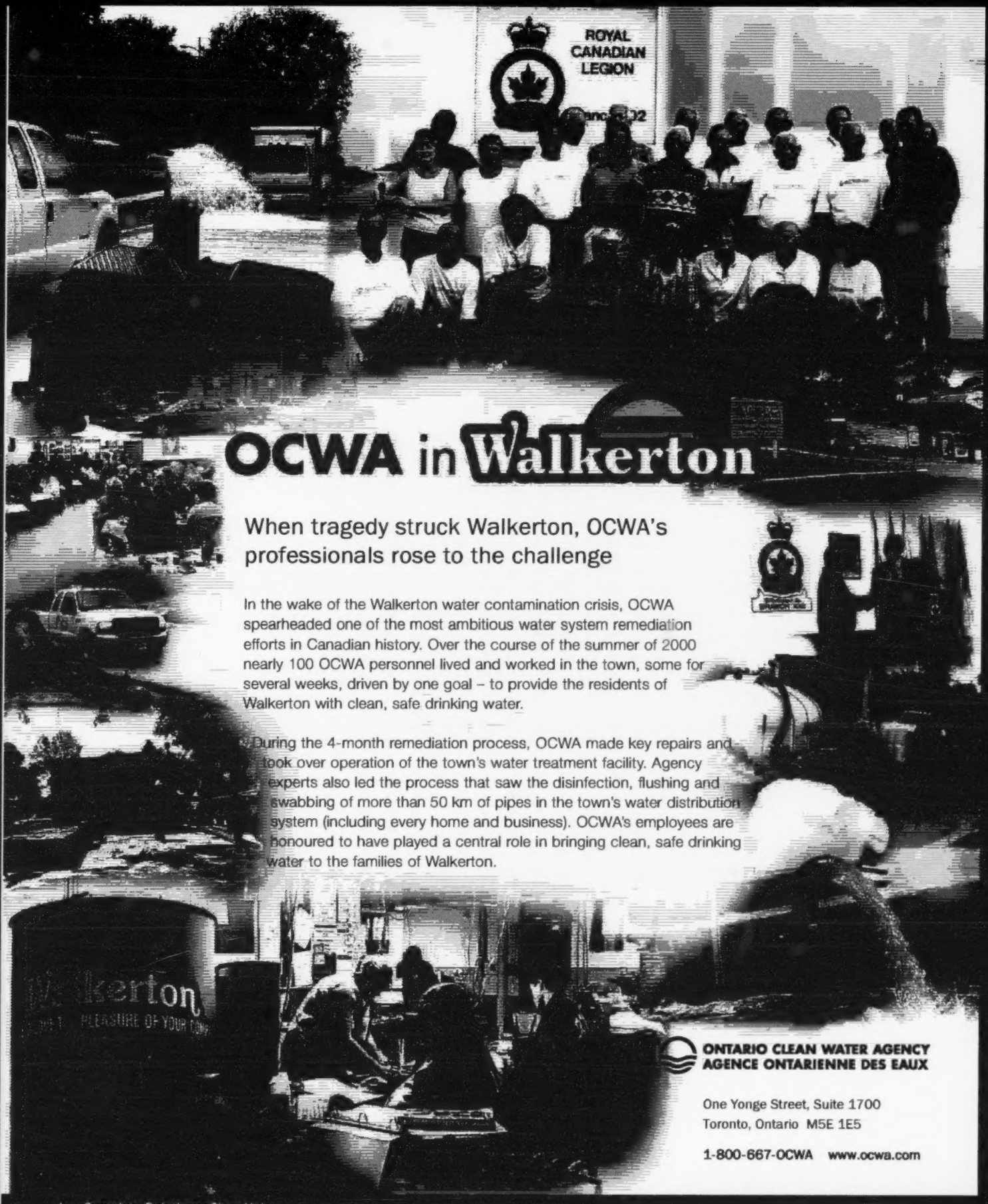
Going forward, municipalities may also be required to create water sustainability plans that would include a financial plan, water conservation plan and strategies for maintaining and improving service. The province would also be able to create new performance indicators and targets to help municipalities maximize efficiency.

"Conservation measures could help to defer some expansion requirements," said Peter Hume, President of the Association of Municipalities of Ontario (AMO). "However, there are cost implications when you add to existing municipal planning processes and introduce new standards. Given that municipalities are already struggling to catch up to their existing infrastructure needs, additional provincial funding is probably needed to achieve the Act's goals. We would start by expanding the Ontario Small Waterworks Assistance Program to help smaller systems upgrade and meet operating costs."

The proposed law would also expand the mandate of the Ontario Clean Water Agency (OCWA). It would enable OCWA to finance and promote the development, testing, demonstration and commercialization of new technologies designed to treat and manage water, wastewater and storm water. It would also allow the Agency to do business outside of the province.

Another major aspect of the legislation is the proposed creation of a Water Technology Acceleration Project, a non-crown corporation that would bring industry, government and academic leaders together to help create and grow companies, job opportunities and new technologies in the water and waste water field.

The proposed new law is open for public consultation until July 17, 2010.



OCWA in Walkerton

When tragedy struck Walkerton, OCWA's professionals rose to the challenge

In the wake of the Walkerton water contamination crisis, OCWA spearheaded one of the most ambitious water system remediation efforts in Canadian history. Over the course of the summer of 2000 nearly 100 OCWA personnel lived and worked in the town, some for several weeks, driven by one goal – to provide the residents of Walkerton with clean, safe drinking water.

During the 4-month remediation process, OCWA made key repairs and took over operation of the town's water treatment facility. Agency experts also led the process that saw the disinfection, flushing and swabbing of more than 50 km of pipes in the town's water distribution system (including every home and business). OCWA's employees are honoured to have played a central role in bringing clean, safe drinking water to the families of Walkerton.

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

One Yonge Street, Suite 1700
Toronto, Ontario M5E 1E5

1-800-667-OCWA **www.ocwa.com**